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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,959	12/04/2002	Stephen Daniel Graham	17MY-7106	2534
27127	7590	10/30/2003	EXAMINER	
HARTMAN & HARTMAN, P.C. 552 EAST 700 NORTH VALPARAISO, IN 46383			BARR, MICHAEL E	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 10/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/065,959

Applicant(s)

GRAHAM ET AL.

Examiner

Michael Barr

Art Unit

1762

-- Th MAILING DATE f this communication appears on the cov r sheet with th corr spond nc address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1202.                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Maricocchi.

Maricocchi teaches forming a diffusion aluminide coating on the internal cooling passages of a superalloy, air-cooled gas turbine engine blade, such that the blade has external coatings of an aluminide bond coat and ceramic thermal barrier coating, where the cooling holes and passages are machined through the bond and thermal barrier coatings, wherein the aluminide coating is applied to the blade, in the form of a suspension (i.e. slurry) with no activator, and onto the coatings and internal cooling passages and then heated to 1975°F (1079°C) in an inert or reducing atmosphere to form the diffusion aluminide coating, such that the existing coatings are undamaged by the aluminiding process (Col. 3, line 62-Col. 4, line 63; Col. 5, line 7-Col. 6, line 5). Figs. 2-3 of Maricocchi indicate that the suspension/slurry is applied uniformly over the ceramic coating and the internal passages of the blade and that the aluminide coating does not form on the ceramic coating.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maricocchi as applied to claim 1 above, and further in view of Pfaendtner et al.

Maricocchi does not teach that the process repairs a portion of an existing aluminide bond coat exposed by a spalled region of the ceramic coating. Maricocchi does teach that the aluminide coating coats all regions not covered by the ceramic coating, including the exposed aluminide bond coat (Fig. 3; Col. 6, lines 1-15). Pfaendtner et al. teaches repairing an aluminide coating on a turbine blade by diffusion aluminide coating with an applied slurry (Para. 0029). One skilled in the art, reviewing the teachings of Pfaendtner et al., would have found it obvious to use the Maricocchi process to repair and coat any areas of aluminide bond coat exposed by a lack of ceramic thermal barrier coating presence, such as by spalling, since it is shown by Pfaendtner et al. that it is well known in the art that aluminide coatings can be repaired and restored by such diffusion aluminide coating and since Maricocchi shows that the diffusion aluminide coating would coat the exposed aluminide bond coat.

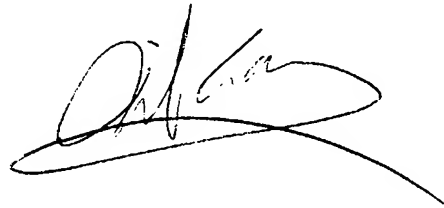
***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Barr whose telephone number is 703-305-7919. The examiner can normally be reached on Monday-Thursday 6:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 703-308-2333. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Michael Barr  
Primary Examiner  
Art Unit 1762

A handwritten signature in black ink, appearing to read 'Michael Barr', with a large, sweeping flourish underneath.

MB  
October 21, 2003